

Appl. No. 09/835,711
Amdt. Dated April 6, 2004
Reply to Office action of October 8, 2003

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REMARKS/ARGUMENTS

The Office Action has been carefully considered. The issues raised are traversed and addressed below with reference to the relevant headings and paragraph numbers appearing under the Detailed Action of the Office Action.

Claim Rejections -35 USC § 103

In paragraph 2 of the Office Action the Examiner has objected to a number of the claims, including the independent claim 155 on the basis of Damouth in view of Hanson.

We would point out that we believe distinctions exist between claim 155 prior to amendment, and the prior art.

Firstly, Damouth describes a system in which a power bus bar is provided to first terminals of the heating elements with the second terminal being individually connected to a control system.

Similarly, in Hanson, whilst ground bus bars are provided to connect to the inside edge of the resistors, the other end of the resistors are not provided connected to bus bars but rather to individual connections.

Thus, whilst Damouth describes power bus bars and Hanson describes ground bus bars, neither document describes a system in which both power and ground bus bars are provided. The direct teaching of a combination of Damouth and Hanson, is to utilise bus bars for connection to one set of terminals, the ground or power terminals, and to use individual connections for the other terminals. We therefore respectfully submit that it is not trivial to arrange to provide interconnect means which allows both power and ground bus bars to be connected to a number of power supply points and ground points.

Thus, we do not believe that a combination of Damouth and Hanson would directly teach providing one longitudinally extending power bus bar, one longitudinally extending ground bus bar, and associated interconnect means.

However, in view of the Examiner's objection and in order to obtain speedy allowance of the application, the independent claim 155 has been revised to introduce further distinctions over the prior art, and in particular to introduce the feature of the interconnect means being configured such that it only need be connected to the printhead along one edge thereof.

We respectfully submit that the claims as amended are further novel and inventive over the cited prior art.

In particular, we acknowledge the Examiner's indication in paragraph 2 of the Office Action that Damouth discloses the interconnect means being configured to only connect to the printhead along one edge thereof. However, we respectfully submit that whilst this feature is shown in Damouth, this feature is only shown with respect to an interconnect means which interconnects with a single bus bar. Thus, Damouth shows a single bus bar, namely the bus bar 38 which is connected only to first terminals in the form of power supply points. With a single bus bar being connected to a single set of

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power supplied points, it is inherent that this would be achieved along one side of the printhead. In the case of Damouth, the second terminals are connected on a second side of the printhead IO.

Thus, in Damouth the printhead 10 is formed from the upper substrate 18 and a lower substrate 12. When the substrates are combined, it is apparent that the bus bar 38 is provided along one edge of the printhead, whilst the second terminal of the heating elements are connected on an alternative opposing edge of the printing substrate. Accordingly, even if the ground bus bar of Hanson were used in Damouth this would be connected to a second side of the printhead, such that there would not be a single interconnect means for both power and ground bus bars connected to one side of the printhead.

To support this, we would also draw the Examiner's attention to Hanson. In particular, Hanson utilises two ground bus bars which are collected to one side of resistors with positive power connections being provided on the other side of respect the resistors via the flex circuit 16. As specifically set out in column 2, lines 63 to 65, the conductive traces connect near the outer edges of substrate 16, whilst the bus bars are provided on inner edges of the substrates thereby comprising different edges.

Thus, we respectfully submit that neither Damouth or Hanson describe a system in which power bus bars and ground bus bars are connected via interconnect means along one edge of the printhead, as required by the amended claim 155.

In the event that the Examiner is minded to obtain objections against claim 155, we would also highlight that claims 157 and 158 relate to the interconnect means being a TAB film, which the Examiner has asserted that this rendered obvious by Hanson. We respectfully submit that this is not the case. In particular, whilst Hanson describes TAB film, this is used to interconnect the positive terminals of the resistors to control means and is not used for interconnecting bus bars to supplied points or longitudinally spaced apart ground supply points. In view of this, we do not believe that the use of the TAB film in such interconnection means is rendered obvious.

In light of the above, it is respectfully submitted that the objections and claim rejections have been successfully traversed and addressed. The amendments do not involve adding any information that was not already disclosed in the specification, and therefore no new matter is added. Accordingly, it is respectfully submitted that the claims 155 to 170, and the application as a whole with these claims, are allowable, and a favourable reconsideration is therefore earnestly solicited.

Very respectfully,

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